

REMARKS

Claims 17-20, 23-25 and 31-48 are pending in this application. By this Amendment, claims 1-16, 21-22 and 26-30 are cancelled and replaced by new claims 31-48. No new matter is added. All claims directed to wye-configured power systems have been cancelled for business reasons in order concentrate on delta-configured power systems. The claims directed to delta-configured power systems essentially have been re-written in order to better protect practical embodiments and not to overcome the applied art of record. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Applicants appreciate Examiner Swarthout's acknowledgment of patentable subject matter in claims 20, 22 and 26. However, Applicants assert that all of the previous and new claims are directed to patentable subject matter for the reasons set forth below.

The Office Action rejects claim 1, 5, 17, 21 and 23 under 35 U.S.C. §112, second paragraph due to minor informalities. By this Amendment, the rejection of claims 1, 5 and 21 is moot as they have been cancelled, and claims 17 and 23 are amended to remove the minor informalities. Accordingly, withdrawal of the rejection is respectfully traversed.

The Office Action rejects claim 1, 3-6, 8, 10-17, 19, 21, 23, 24, 27, 28 and 30 under 35 U.S.C. §102(e) over Merriman et al (U.S. Patent No. 6,614,326) in view of Perkins (U.S. Patent No. 4,188,619), and rejects claims 2, 7, 9, 18, 25 and 29 under 35 U.S.C. §103(a) over Merriman in view of Perkins and Abraham (U.S. Patent No. 6,014,386). These rejections are moot regarding cancelled claims 1-16, 21, 24, 26-35 and 27-31, obviated for claims 17-19, 23 and 25 (as independent claims 17 and 23 have been amended to incorporate subject matter deemed patentable by the Office Action), and respectfully traversed to the extent that they might apply to any of new claims 31-48.

In particular, Applicants assert that it would not have been obvious at the time of the invention to modify Merriman using either or both of Abraham or Perkins to teach or suggest, a coupling system that includes an electronic network that includes one or more reactive devices configured to provide an electrical interface between the first communication device emitting local area network (LAN) communication signals and a respective power wire of the power distribution system such that the electronic network provides a broadband [LAN] differential communication signal across all pairs of the power distribution system, wherein power distribution system is a three-phase delta-configured network having three phases A, B and C corresponding to a respective power wire of the power distribution system., as recited in independent claim 31 and similarly recited in independent claims 47 and 48.

Merriman discloses a coupling device resembling an electrical breaker for use in buildings having a wye-configured, three-phase electrical system. See, Abstract, FIG. 5 and col. 4, lines 32-35, for example. While the Office Action notes that Merriman does not state the “*three phase network is a Wye or Delta connected distribution system*” (see, page 2, section 1), Applicants point out that the only configuration disclosed (shown in FIG. 5) is a wye power network. Accordingly, Merriman does not teach or suggest a broadband LAN communication signal across all pairs of a [delta-configured] power distribution system, as required by the independent claims. Thus, Merriman does not disclose or suggest each and every limitation of the independent claims.

Perkins discloses a transformer arrangement for coupling a communications signal onto a medium voltage power network 10, which is coupled to a high-voltage power network 20 (having power lines 22). Perkins does not teach or suggest a LAN communication signal across all pairs of a [delta-configured] power distribution system, as is recited in independent claim 31

and similarly recited in independent claims 47 and 48. To the contrary, while the Office Action asserts on page 2 that “*Perkins discloses connecting communication signals to all three-phases of a Wye-Delta distribution network*” while citing FIG. 1, Applicants respectfully point out that FIG. 1 is an example of a medium-voltage, low-frequency WAN device, not of low-voltage broadband LAN technology.

Applicants further point out that, according to the very text of Perkins, any communication signals generated by transceiver 24 of FIG. 1 “merely induce a circulating current in the high voltage winding 18 and **do not get coupled onto transmission line 22**”. {bolded emphasis added} See, col. 4, lines 43-46. Thus, Perkins does not provide for the deficiencies of Merriman.

Abraham does not disclose an electronic network that provides a broadband [LAN] differential communication signal across all pairs of the three-phase, delta-configured distribution system, nor does the Office Action make such an assertion. Thus, Abraham does not provide for the deficiencies of Merriman and Perkins.

The Office Action has not established a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art references must teach or suggest all the claim limitations, there must be some motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the reference teachings and there must be a reasonable likelihood of success to combine the references. See MPEP §2143, for example.

As discussed above, the Office Action has not provided each and every limitation of the independent claims.

Further, the Office Action has not provided an appropriate motivation to modify the Merriman device, with is directed to low-voltage LANs, with the teachings of Perkins, which are directed to WAN communications systems using wye-configured medium voltage systems (~12,000 volts) and delta-configured high-voltage (>100,000 volts), both of which are unsuitable for breaker boxes, such as the one used in Merriman. While the Office Action asserts that “[c]hoosing a passive coupling arrangement as disclosed by Merriman in conjunction with a ... Delta network as suggested by Perkins would have been obvious ... merely depending on what type of power distribution network was already in place in order that signals could have been communicated over an existing network”, this assertion is problematic for a number of reasons.

First, the assertion is not disclosed or suggested in any of the applied art of record, and the Office Action has not provided any evidence that one of ordinary skill in the art would make the claimed combination.

Second, as mentioned above, Merriman specifically discloses a wye-configured distribution system.

Third, it remains unapparent as to why one of ordinary skill in the art would apply the teachings of an outdated (circa 1978) WAN system to a more recent (circa 2001) LAN system given the large difference between LAN and WAN functionality as well as the rapid changes in communications technology. That is, while Applicants are well aware that the age of a particular reference may not be relevant under the patent laws, the actual desirability of modifying a particular LAN device with WAN technology that is clearly three generations out of date is suspect.

Finally, it should be appreciated that the Merriman device works in a completely different fashion than the Perkins device, in that the Merriman device is directed to passively coupling an existing communications signal found on a first power lines onto the other two power lines, while

Perkins serves no such function whatsoever. Modifying the Merriman device to use the transformer arrangement of Perkins makes no sense as the Merriman device doesn't use signals originating from any source but one of the power lines, and incorporating the teachings of Perkins would change the fundamental principles of operation of the Merriman device.

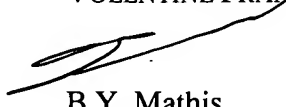
Therefore, the independent claims are directed to patentable subject matter. The dependent claims are directed to patentable subject matter by virtue of their dependency as well as for the additional features they recite. Accordingly, Applicants respectfully request due consideration of new claims 31-48 under 35 U.S.C. §103(a).

Applicant respectfully solicits that this Application is in condition for allowance, and Applicant requests that the Examiner give the Application favorable consideration and permit it to issue as a patent. However, if the Examiner believes that the Application can be put in even better condition for allowance, the Examiner is invited to contact Applicant's representative listed below.

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Respectfully submitted,

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